

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
30 June 2005 (30.06.2005)

PCT

(10) International Publication Number
WO 2005/058569 A1

(51) International Patent Classification⁷: **B29B 9/06**, 9/12,
B65D 65/46, C08L 29/04, C08J 3/12

(21) International Application Number:
PCT/GB2004/005273

(22) International Filing Date:
16 December 2004 (16.12.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
0329529.2 19 December 2003 (19.12.2003) GB

(71) Applicant (for all designated States except MN, US):
RECKITT BENCKISER N.V. [NL/NL]; Kantoorge-
bouw De Appelaer, De Fruittuinen 2-12, NL-2132 NZ
Hoofddorp (NL).

(71) Applicant (for MN only): **RECKITT BENCKISER (UK)
LIMITED** [GB/GB]; 103-105 Bath Road, Slough, Berk-
shire SL1 3UH (GB).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **AYATS, Francesc**
[ES/ES]; Reckitt Benckiser (Espana) SL, C/ Mataro,
28, Granollers, E-08400 Barcelona (ES). **OEHMS, Di-
ana** [DE/DE]; Reckitt Benckiser Produktions GmbH,
Benckiserplatz 1, 67059 Ludwigshafen (DE). **ROY,
Pavlinka** [DE/DE]; Reckitt Benckiser Produktions GmbH,
Benckiserplatz 1, 67059 Ludwigshafen (DE). **SAL-
VADOR, Jordi** [ES/ES]; Reckitt Benckiser (Espana)
SL, C/ Mataro, 28, Granollers, E-08400 Barcelona (ES).

WIEDEMANN, Ralf [DE/DE]; Reckitt Benckiser Pro-
duktions GmbH, Benckiserplatz 1, 67059 Ludwigshafen
(DE).

(74) Agents: **BOWERS, Craig, M.** et al.; Reckitt Benckiser
plc, Group Patents Department, Dansom Lane, Hull HU8
7DS (GB).

(81) Designated States (unless otherwise indicated, for every
kind of national protection available): AE, AG, AL, AM,
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,
ZW.

(84) Designated States (unless otherwise indicated, for every
kind of regional protection available): ARIPO (BW, GH,
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,
ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,
FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO,
SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN,
GQ, GW, ML, MR, NE, SN, TD, TG).

Declaration under Rule 4.17:

— as to applicant's entitlement to apply for and be granted a
patent (Rule 4.17(ii)) for all designations

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.

(54) Title: PROCESS FOR MAKING A PELLET

(57) Abstract: The invention comprises a shaping process for making pellets of a thermoplastic extrudable resin composition. The resin composition comprises a thermoplastic polymer, plasticiser and optionally further additives. The plasticiser comprises a component which is solid at room temperature. The process is run at a temperature above the melting point of the plasticiser and below the melting / plastification temperature of the thermoplastic polymer.

WO 2005/058569 A1

PROCESS FOR MAKING A PELLET

The present invention relates to a process for making pellets of a thermoplastic extrudable polymer.

5

Processes for making pellets of thermoplastic extrudable polymer are well known in the plastic industry. Typically the pellets are cylindrical and approximately 3mm in diameter and 3mm in length. The pellets are used in a wide range of plastic article manufacturing processes.

The pellet manufacturing process generally includes a plastification step. In this step the formulation to be pelletised is melted and fed into a twin screw extruder. This has been seen to be beneficial as the pellets produced have been found to comprise of a homogeneous blend of the pellet components due to effective mixing of all molten components in the extruder.

EP-A-0 415 357 describes the making of pellets comprising polyvinylalcohol (PVOH) by melt extrusion with the extrusion being carried out in the temperature range of 150-195°C.

Pelletising processes having a plastification step have several disadvantages associated therewith. The principle disadvantage is the requirement for heating, which means that the energy consumption of these processes is very high.

Furthermore these 'hot' processes are not suitable for polymers which are heat sensitive (such as PVOH) due to heat induced decomposition. Also these 'hot' processes give a heat